AIR FORCE RESEARCH LABORATORY [AFRL]

Manager of the Basic Research Investment for the Air Force Research Laboratory

Research HIGHLIGHTS

MAY JUN 00

Breakthroughs In Infrared Technology Using Semiconductor Quantum Dots

Collaboration between researchers from an AFOSR-sponsored university program and the Air Force Research Laboratory (AFRL) is contributing sig-nificant progress in infrared sources and detectors, which form the basis of night flying and targeting systems.

The Future Aerospace Science and Technology (FAST) Center at the University of New Mexico includes Dr. Kevin J. Malloy, Director, Drs. Luke Lester, Andreas Stintz and Tim Newell and many graduate and undergraduate students. Working closely with the UNM FAST Center are two directorates of AFRL. Collaborative research has been ongoing with Drs. David Cardimona and Anjali Singh of the Space Sensing Vehicle Control Branch of the Space Vehicles Directorate. Also working with the UNM FAST Center is the Semiconductor Laser Branch of the Directed Energy Directorate. Research collaborations exist with AFRL scientists Drs. Andrew Angstad, Ron Kaspi and Ms. Sylvia Dorato. The collaborative efforts take advantage of the infrared detector fabrication facilities at UNM and the extensive infrared characterization facilities at AFRL.

Recently, these teams have made some important breakthroughs in infrared technology using semiconductor

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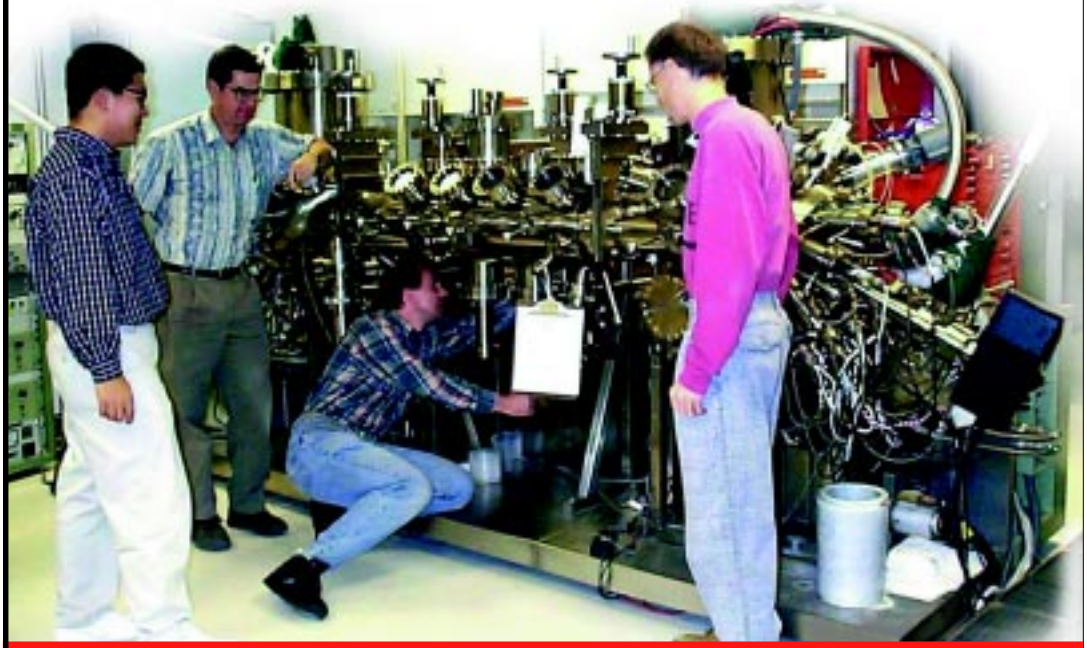

ABOVE: The molecular beam epitaxy (MBE) machine used to grow quantum dots. Left to right: Guangtian Liu, Prof. Kevin Malloy, Dr. Andreas Stintz and Dr. Tim Newell

AFOSR Program Manager Receives Prestigious Award

Dr. Michael R. Berman Honored With Arthur S. Flemming Award

Dr. Michael R. Berman is a recipient of the 1999 Arthur S. Flemming Award for the year 1999. The Award, recognized by the President of the United States, U.S. Agency Administrators and the private sector, honors exemplary contributions of outstanding men and women serving the Federal Government. The winners for this prestigious award are selected from all areas of federal service in three main categories: basic science, applied science and executive/administrative.

The Arthur S. Flemming Award was established at George Washington University in 1948 and past Flemming honorees include Senator Daniel P. Moynihan, Elizabeth Hanford Dole and Dr. Anthony Fauci, director of the National Institute for Allergies and Infectious Diseases.

Dr. Berman, who works at AFOSR and manages Molecular

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